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1898—No. 9.

GOSSYPIMUM SP.

(EGYPTIAN COTTON.)

[*DICTIONARY OF ECONOMIC PRODUCTS*, Vol. IV., G. 381.]

EXPERIMENTAL CULTIVATION OF EGYPTIAN COTTON
IN RADHANPUR.

A Memorandum by MAJOR M. T. LYDE, I.R.C., Administrator, Radhanpur State.

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EXPERIMENTAL CULTIVATION OF EGYPTIAN COTTON IN RADHANPUR.

A Memorandum by MAJOR M. T. LYDE, I.S.O., Administrator, Radhanpur State.

From time to time interest has been aroused in the subject of the cultivation in India of Egyptian cotton. The several experiments which have been carried out in India with Egyptian cotton seed have not perhaps on the whole been always favourable in their results. To those, however, who have occupied themselves in similar operations, the following brief account of Egyptian cotton experiments conducted in the Radhanpur State is, it is considered, sufficiently interesting to warrant its publication in *The Agricultural Ledger*. The paper has been obligingly furnished by Major Lyde, under whose supervision the work was initiated.

The two varieties of Egyptian cotton now being experimented with are "Zafiri" and "Abassi." "Zafiri" cotton is named after its discoverer, Mr. Zafiri Parachimonas; while the name "Abassi" is derived from Wadi Abassi on the east bank of the Blue Nile, or Dar Sennar, a subdivision of Upper Nubia. Egyptian cotton is known for its good colour and long staple, and finds a ready outlet on European markets.

Experimental cultivation of Egyptian varieties of cotton has been undertaken at the Government Agricultural Farms during the past

PREFATORY
REMARKS.

Zafiri and
Abassi
Cotton.

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sp.

Experimental Cultivation of

EGYPTIAN
COTTON
CULTIVA-
TION.
Nagpur.

year or two. At Nagpur the quality of the Cairo cotton was pronounced to be excellent and gave a yield of about double the value of the ordinary kinds. So successful was the experiment that large sowings were made in 1897, and if the results are satisfactory there will be a big demand for Egyptian cotton seed. It is recommended to be grown as a *rabi* crop and, if necessary, irrigated.

Cawnpur.

At Cawnpur the fact was discovered that several varieties of cotton were capable of yielding successive outturns of fibre and seed if the plants were, instead of being cut down at the completion of the first picking, allowed to stand in the field. Major Lyde, at Radhanpur, obtained good results by allowing the plants to grow up again from the shoots after they had been cut down at the termination of the first crop. It would be very important to show the relative economy of these two methods.

Radhanpur.
Quantity of
seed sown.

EGYPTIAN COTTON :—One maund of Egyptian cotton seed of which about thirty pounds were sown was received from Bombay. The seed was sown in a measured acre of land which, although favourably situated close to Radhanpur Town and at a short distance from a large tank, was without a cultivator in consequence of the land being considered *kādra*, a term which in this State appears to refer not only to salt lands but also to impoverished ones. The land was well ploughed with a country plough and furrows were made at a distance of one yard from each other the breadth of the furrow included, which was about 10 inches, the depth being the same. The sowing was commenced on the 9th October 1896 eight or ten seeds being planted in the ground immediately under one side of the ridge and 12 to 14 inches apart. The whole was watered seventeen times and only the strongest plants left. The picking commenced on the 1st May 1897 and was completed by the 31st idem. As it is customary in this State to pick cotton with the husk, the cotton was so picked, and the weight reported by the official who superintended the picking was 806lb of *kapas* with the husks called here *kālla*. This had to be sent 15 miles to the ginning factory, and on arrival was found to weigh only 685lb. It, therefore, remains uncertain whether a portion of it was stolen or whether it was wrongly weighed in Radhanpur before despatch. At any rate there is no mistake about the result of the ginning which gave 185½

Land how
prepared.

Date of
sowings.

Of
gathering.

Result of the
picking.

Of ginning.

Egyptian Cotton in Radhanpur. (M. T. Lyde)

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sp.

of cleaned cotton and 325lb of seed. In this State cotton is sown during the rains which ordinarily last from the middle or end of June to the middle of September with perhaps a few showers later on. In sowing in October I followed a suggestion contained in a pamphlet I received from Mr. Tata, a gentleman of Bombay interested in cotton and who was good enough to procure the seed for me. In this pamphlet he pointed out that the proper season for sowing was a point yet to be ascertained, and with a view to decide this I determined to leave the cotton shrubs in the ground. I had the shrubs cut down therefore and manured with town sweepings before the commencement of the rains of 1897 which were very late, the first rain falling on the 16th of July. On the 13th December 1897 the first picking of the second crop was commenced and up to date the whole of the cotton has not been picked as there are still pods and a few flowers on the shrubs. As, however, I am leaving Radhanpur for a time I give the result of the experiment up to date. At the first picking of this second crop the husks were picked with the kapás and the weight with the husks was 156lb which represents not less than 45lb of cleaned cotton. Since then only the kapás have been picked leaving the husk on the shrubs and up to date 295lb of kapás have been picked beside that picked with the husk, the same ratio of cleaned cotton to seed as was found to exist by the result of the experiment of 1896 gives 108lb of cleaned cotton. This then added to the 45lb above referred to gives a total of 150lb of cleaned cotton, and, as I have already stated, the pickings have not been completed. Since the commencement of the ripening of the pods in 1897, that is to say, since the 20th of April 1897, no water has been given. In about a month's time when the pickings have been completed the shrubs will be again cut down and the ground manured with town sweepings, and it is believed that the plants will survive the hot weather without being watered and again bear fruit after the rains, and I am anxious to establish the fact that a cultivator may, if he is able to irrigate the first sowing, always have, say, 15 acres of cotton under cultivation and only have to plough and prepare 5 acres a year, and this would enable him to cultivate three times as much land for cotton per annum as he does now with, so far as the preparation of the ground is concerned, the same

EGYPTIAN
COTTON
CULTIVATION.An opinion
on season
for sowing.

Second crop.

Date of first
picking.Result of the
picking.Important
fact which
it seems
desirable to
establish.

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sp.**Experimental Cultivation of Egyptian Cotton in Radhanagar.****EGYPTIAN
COTTON
CULTIVA-
TION.****Expert's
opinion on
this year's
picking.****General
conclusions.**

amount of labour as he at present expends on one-third of the area or better still he will be able to devote more time and care to the preparation of the soil for the new crop of five acres which he would sow yearly. This calculation is based on the assumption that after the third crop the cotton will deteriorate, but I know of no reason why this should be the case so long as the land is carefully weeded and manured. A sample of this year's picking I have submitted to Mr. Tata, and he has stated as his opinion that "the sample though not equal to the ordinary Egyptians, compares favourably with our best Indian varieties. The quality is fairly good and the staple longer and stronger than Broach. In value I believe it would fetch Rs 15 more per candy than good Broach." I shall request my successor to continue the experiment and this year to sow an acre during the rains at the same time as country cotton is ordinarily sown in this State, and to leave this without water through the following hot weather. I shall also request him to sow half an acre with the seed of this year's pickings.

From the above experiment the following results may be noted. The cotton leaves the seed quite clean when it is ginned, whereas in the indigenous varieties a certain portion clings to the seed. On page 61, section 468 of Vol. IV. of the *Dictionary of Economic Products of India*, the average yield of cleaned cotton per acre in the Bombay Presidency is shown to be 79½ lb, the yield of cleaned to seed cotton being taken as 30 : 100, whereas the result of my experiment has been to show that the ratio is with Egyptian cotton considerably higher, and that the outturn was in 1896, 185½ lb, although the year was not particularly favourable and that up to date the yield this year may be taken as 150 lb although the pickings are not finished and this year the condition of the ordinary cotton crops is bad. By raising the plants with the aid of irrigation at first and then leaving them in the ground there need be no anxiety regarding the rain as there now is, for when the seed is sown yearly if it cannot be sown either on account of want of, or of excessive rain, at the proper time the crop is a failure, and lastly that cotton when grown as in this experiment is able to resist a considerable quantity of salt in the land for on the land chosen for this experiment, after watering, a white efflorescence appears on the surface.

G. 381.

G. I. C. P. O.—No. 142 R. & A.—12-9-98.—2,225—H. R.

All communications regarding THE AGRICULTURAL LEDGER should be addressed to the Editor, Dr. George Watt, Reporter on Economic Products to the Government of India, Calcutta.

The objects of this publication (as already stated) are to gradually develop and perfect our knowledge of Indian Agricultural and Economic questions. Contributions or corrections and additions will therefore be most welcome.

In order to preserve a necessary relation to the various Departments of Government, contributions will be classified and numbered under certain series. Thus, for example, papers on Veterinary subjects will be registered under the Veterinary Series. Those on Forestry in the Forest Series. Papers of more direct Agricultural or Industrial interest will be grouped according as the products dealt with belong to the Vegetable or Animal Kingdom. In a like manner, contributions on Mineral and Metallic subjects will be registered under the Mineral Series.

The sheet and the title-page may be removed when the subject-matter is filed in its proper place, according to the letter and number shown at the bottom of each page.

NOTICE.

Future issues of this publication placed under either the "Special Veterinary" or "Special Forest Series" will not be included in the annual enumeration. Such papers are printed for Departmental purposes. Their unfortunate inclusion in the system of annual numbering has led recipients of the ordinary issues to think their sets incomplete.

The following pamphlets have already appeared as Special issues and have not accordingly been furnished to the public:—

1894.	Nos. 8, 9, 10, 11, 13 and 15.
1896.	No. 8.

